

Title (en)

Method and apparatus for maximizing the productivity of a natural gas liquids production plant

Title (de)

Verfahren und Vorrichtung zur Maximierung der Produktivität einer Erdgasverflüssigungsanlage

Title (fr)

Procédé et dispositif pour optimiser la productivité d'une unité de liquéfaction de gaz naturel

Publication

EP 1031803 A3 20011010 (EN)

Application

EP 00400475 A 20000222

Priority

US 25918799 A 19990226

Abstract (en)

[origin: EP1031803A2] An objective in a natural gas liquids (NGL) plant is that of achieving and maintaining maximum productivity. If this plant is equipped with a turboexpander that drives a gas compressor (recompressor), maximum turboexpander productivity provides maximum plant productivity attained by maximum compressor power. This is accomplished by manipulating the compressor operating point location (by adjusting the opening of the antisurge valve) and by controlling rotational speed. The subjects of the proposed invention are the method and apparatus (comprising a turboexpander/recompressor rotational speed controller and a recompressor antisurge controller) providing maximum turboexpander/recompressor rotational speed and recompressor operating point location (corresponding to maximum power) by opening the turboexpander's adjustable nozzles and the recompressor antisurge valve.

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Citation (search report)

- [A] EP 0500195 A2 19920826 - COMPRESSOR CONTROLS CORP [US]
- [A] US 5743714 A 19980428 - DROB DMITRY [US]
- [A] EP 0676545 A2 19951011 - COMPRESSOR CONTROLS CORP [US]
- [A] US 5499505 A 19960319 - GISTAU-BAGUER GUY [FR]
- [A] US 4698080 A 19871006 - GRAY MICHAEL L [US], et al
- [A] WO 9733131 A1 19970912 - NORSKE STATS OLJESELSKAP [NO], et al

Cited by

US8532830B2; EP1777389A3; GB2596405A; EP2482016A1; US2018363976A1; US11022369B2; US2011130883A1; IT201600070852A1; GB2450666A; GB2450666B; WO2012101502A3; WO2018007509A1; WO2010012560A3; WO2007135062A3

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